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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,127	06/07/2006	Dong-Hyuk Lee	CMP-0008-SE	2190

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EXAMINER

KHOSHNOODI, NADIA

ART UNIT	PAPER NUMBER
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2494

MAIL DATE	DELIVERY MODE
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07/19/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/582,127	LEE, DONG-HYUK	
	Examiner	Art Unit	
	NADIA KHOSHNOODI	2494	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 8-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Claims 5-7 have been cancelled. Applicant's arguments/amendments with respect to previously pending claims 1-4 & 8-12 and newly added claims 13-18 filed 5/13/2011 have been fully considered. The arguments with regards to claims 1-4 and 8-12 have been fully considered but are not persuasive and newly added claims 13-18 which include features not previously claimed are moot in view of new grounds rejection. The Examiner would like to point out that this action is made final (See MPEP 706.07a).

Response to Argument

Applicant contend that the combination of Taylor and Malcolm fails to teach a "firewall flexible device determines whether a network communication program is registered in the list of communication permitted programs, and if the network communication program is registered, the server port is registered in the internal permitted port storage." Examiner respectfully disagrees. Taylor teaches that that a firewall determines whether a connection establishing packet, i.e. communication permitted programs, was received on a particular port that has been registered and if the packet including the connection request has been registered (col. 5, line 66 - col. 6, line 12). However, Taylor failed to teach where the internal permitted program storage list stores a list of programs which are permitted to have server ports registered by the firewall, where the firewall determines if the network communication program is registered in the list of programs. Malcolm was introduced since Malcolm teaches a firewall device which maintains a list of application programs that are attempting to connect to a particular server port, where

application programs are added to the list and where the firewall determines whether the application program is registered in the list of programs stored (col. 9, lines 38-52). Furthermore, Examiner would like to note that Malcolm teaches that the firewall makes this determination based on its configuration (col. 9, lines 42-45). One of ordinary skill in the art at the time the invention was made would have been motivated to modify Taylor to include the aforementioned features in Malcolm since Malcolm suggests that maintaining a list of application programs which are permitted to access particular ports ensures that only authorized application programs gain access to the network in col. 7, lines 27-33 and col. 9, lines 38-52. Furthermore, Examiner would like to note that Examiner was unable to locate a particular definition in Applicant's disclosure for the term "firewall flexible device" and therefore this term has been given its broadest reasonable interpretation according to MPEP 2111. Thus, the combination of Taylor and Malcolm teaches/suggests firewall flexible device determines whether a network communication program is registered in the list of communication permitted programs, and if the network communication program is registered, the server port is registered in the internal permitted port storage.

Applicants further note "Hence, a server port is **automatically** registered based on the determination of the firewall flexible device on whether the network communication program is registered in the program storage." Examiner respectfully disagrees. Furthermore, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a server port being **automatically registered** based on the determination of the firewall flexible device) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations

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from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Specifically, Examiner would like to note that the claimed language recites that extracted information about the server port that is registered in the internal permitted port storage when a firewall flexible device determines that a network communication program is registered. Nowhere does the claim recite that the firewall flexible device automatically registers a server port.

Applicants further contend that Malcolm fails to teach or suggest “a registration of a server port in an internal permitted port storage based on whether a network communication program is registered in an internal permitted program storage as recited in the claims inventions.” Applicants further continue to note “In other words, Malcolm is merely directed to control communication by setting up access rule including **a destination port, not a server port.**” Examiner respectfully disagrees. Malcolm teaches that the disclosed computer may be a desktop computer or server, where in the embodiment that the computer is a server the port would be interpreted as a server port (col. 9, lines 14-16). Furthermore, Malcolm teaches the use of a firewall which contains rules to control access of various application programs to the Internet, i.e. internal permitted program storage, on predetermined ports, i.e. server port in an internal permitted port storage (col. 9, lines 25-37). Therefore, Malcolm teaches/suggests registration of a server port in an internal permitted port storage based on whether a network communication program is registered in an internal permitted program storage.

Finally, Applicants contend that Malcolm (and Taylor) fail to teach or suggest “that a list of programs permitted to have server ports registered by a firewall is stored in an internal permitted program storage, where the internal permitted program storage adds a program to the

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list by extracting information about the programs for which communication is permitted by the firewall and registering the extracted information in the list, and determining whether the network communication program is registered in the list of programs stored in the internal permitted program storage, as included in the claimed invention.” Examiner respectfully disagrees. Malcolm teaches that the disclosed computer may be a desktop computer or server, where in the embodiment that the computer is a server the port would be interpreted as a server port (col. 9, lines 14-16). Furthermore, Malcolm teaches the use of a firewall which contains rules to control access of various application programs to the Internet, i.e. internal permitted program storage, on predetermined ports, i.e. server port in an internal permitted port storage (col. 9, lines 25-37). Regarding extracting information about the ports registered by the firewall, Examiner would like to note that Taylor was relied upon for this feature. More specifically, Taylor teaches an internal permitted program storage for extracting information about a program for which communication is permitted by the firewall, and registering the extracted information (col.5, line 66 – col. 6, line 12); an internal permitted port storage registering the extracted information about the server port if the network communication program extracted from the information about the server port is registered in the internal permitted program storage (col. 6, lines 13-25). Examiner would like to note that "extracting information" is broad and is therefore given the broadest reasonable interpretation according to MPEP 2111. Also, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, the combination of Taylor and Malcolm teaches that

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a list of programs permitted to have server ports registered by a firewall is stored in an internal permitted program storage, where the internal permitted program storage adds a program to the list by extracting information about the programs for which communication is permitted by the firewall and registering the extracted information in the list, and determining whether the network communication program is registered in the list of programs stored in the internal permitted program storage.

Examiner suggests that Applicants incorporate language into the claims which include the novelty of their invention over the cited prior arts. Specifically, various areas Applicants may want to focus on when incorporating language into the claims could include the specifics of how the firewall device is flexible over conventional firewalls by incorporating features from the disclosure. Examiner encourages Applicants to include language that they believe would be patentably distinct over the cited prior art, in a manner that the points argued and the novelty of the invention are actually claimed.

Due to the reasons stated above, the Examiner maintains rejections with respect to the pending claims. The prior arts of records taken singly and/or in combination teach the limitations that the Applicant suggests distinguish from the prior art. Therefore, it is the Examiner's conclusion that the pending claims are not patentably distinct or non-obvious over the prior art of record as presented.

Claim Objections

Claims 15-18 are objected to because of the following informalities: line 3 of each of these claims makes reference to a "sever port" where Examiner believes Applicants intended to claim a "server port." Appropriate correction is required.

Claim Rejections - 35 USC § 103

I. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

II Claims 1, 4, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al., US Patent No. 6,728,885 and further in view of Malcolm, US Patent No. 7,146,638. As per claims 1, 4, and 10:

Taylor et al. substantially teach a network security system/method/computer-readable recording medium comprising: a port monitoring unit for extracting information about a server port being used by a network communication program (col. 5, lines 33-36); an internal permitted program storage for extracting information about a program for which communication is permitted by the firewall, and registering the extracted information (col.5, line 66 – col. 6, line 12); an internal permitted port storage registering the extracted information about the server port if the network communication program extracted from the information about the server port is registered in the internal permitted program storage (col. 6, lines 13-25); and wherein the firewall

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flexible device further determines whether a destination port of a packet of inbound traffic has been registered in the internal permitted port storage and blocks the packet if inbound traffic if the destination port has not been registered (col. 5, line 66 - col. 6, line 20; col. 10, line 57 – col. 11, line 3; and Fig. 4, elements 303, 311, & 321).

Not explicitly disclosed is where the internal permitted program storage stores a list of programs permitted to have server ports registered by the firewall, wherein the internal permitted program storage adds a program/program information to the list and a firewall flexible device for determining whether the network communication program is registered in the list of programs stored in the internal permitted program storage, where the firewall flexible device determines that the network communication program is registered in the list of programs. However, Malcolm teaches a firewall device maintaining a list of application programs who are attempting to connect to a particular server port, where application programs are added to the list and where the firewall determines whether the application program is registered in the list of programs stored (col. 9, lines 38-52). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Taylor et al. to store a list of permitted programs registered by the firewall and to have the firewall determine whether the network communication program is registered in the list of programs stored in the internal permitted program storage. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since Malcolm suggests that maintaining a list of application programs which are permitted to access particular ports ensures that only authorized application programs gain access to the network in col. 7, lines 27-33 and col. 9, lines 38-52.

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As per claims 11-12:

Taylor et al. and Malcolm substantially teach the network security system/method as set forth in claims 1 and 4. Furthermore, Taylor et al. teach wherein the firewall flexible device allows the packet of inbound traffic to bypass the firewall if the destination port has been registered (col. 10, line 63 - col. 11, line 15).

III. Claims 2-3 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al., US Patent No. 6,728,885 and Malcolm, US Patent No. 7,146,638 as applied to claims 1 and 4 above, and further in view of Yadav, US Pub. No. 2003/0149887.

As per claims 2 and 8:

Taylor et al. and Malcolm substantially teach the network security system as set forth in claims 1 and 4. Furthermore, Taylor et al. teach wherein the information about the program includes information about the program name (col. 5, lines 18-65). Not explicitly disclosed is wherein the information about the program, which is extracted and registered in the internal permitted program storage, includes information about an entire path of the program, and a program hash value. However, Yadav teaches that an application communicating over a network may be identified by its entire path and message digest hash value (par. 45). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Taylor et al. to register the entire path of the program, in addition to an MD5 hash value in the internal permitted program storage. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since Yadav suggests that the file path and the hash value may be used in successfully identifying an application and determining if the application is authorized or not

for intrusion detection purposes in par. 46.

As per claims 3 and 9:

Taylor et al. and Malcolm substantially teach the network security system as set forth in claims 1 and 4. Furthermore, Taylor et al. teach where the information about the server port stored in the internal permitted port storage includes a protocol and a port (col. 7, lines 4-67). Not explicitly disclosed is wherein the information about the server port, which is registered in the internal permitted port storage, includes information about at least one of an entire path of the program. However, Yadav teaches that an application communicating over a network may be identified by its entire path (par. 45). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Taylor et al. to register the entire path of the program in the internal permitted program storage. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since Yadav suggests that the file path may be used in successfully identifying an application and determining if the application is authorized or not for intrusion detection purposes in par. 46.

IV. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor et al., US Patent No. 6,728,885 and Malcolm, US Patent No. 7,146,638 as applied to claims 1, 4, and 10 above, and further in view of Kokado, US Pub. No. 2003/0115327.

As per claims 13, 15, and 17:

Taylor et al. and Malcolm substantially teach the network security system as set forth in claims 1, 4, and 10. Not explicitly disclosed is wherein the internal permitted port storage registers the extracted information about the server port if the server port is determined to be

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opened. However, Kokado et al. teach that various information regarding a server port is registered once it is determined that the server port is opened (par. 197). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Taylor et al. to register the entire path of the program in the internal permitted program storage. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since Kokado et al. suggest monitoring the network for opened/closed services/server ports in order to keep track of available and unavailable services in par. 197.

As per claims 14, 16, and 18:

Taylor et al. and Malcolm substantially teach the network security system as set forth in claims 1, 4, and 10. Not explicitly disclosed is wherein the extracted information about the server port is deleted from the internal permitted port storage registers the extracted information about the server port if the server port is determined to be closed. However, Kokado et al. teach that various information regarding a server port is deleted once it is determined that the server port/service is no longer available (par. 197). Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Taylor et al. to register the entire path of the program in the internal permitted program storage. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, would have been motivated to do so since Kokado et al. suggest monitoring the network for opened/closed services/server ports in order to keep track of available and unavailable services in par. 197.

Conclusion

Applicant's amendment adding new claims 13-18 necessitated the new ground(s) of rejection presented in this Office action with regards to those particular claims (where the arguments presented in regards to previously presented claims were not persuasive).

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nadia Khoshnoodi whose telephone number is (571) 272-3825. The examiner can normally be reached on M-F: 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Kim can be reached at (571) 272-3804. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Nadia Khoshnoodi/
Examiner, Art Unit 2437

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NK

/Jung Kim/
Supervisory Patent Examiner, Art Unit 2494